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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,154	03/28/2001	Hideo Nakamura	M1596-235	3953

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EXAMINER	
NGUYEN, LUONG TRUNG	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,154	NAKAMURA ET AL.	
	Examiner	Art Unit	
	LUONG T. NGUYEN	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-18 and 22-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-18, 22-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 4-18, 22-26 and newly added claim 27 filed on 4/11/2005 have been fully considered but they are not persuasive.

In re page 10, Applicants argue that in Figure 2, a microprocessor 52 performs correction such as autofocus and autoranging as stated in the following:

Besides offering autofocus and autoranging, the utilization of a beamsplitter reduces the complexity of the optics and image alignment, and takes up less space in the camera. In addition, this arrangement eliminates parallax (pointing) errors between the sensors. (Smith, column 6, lines 29-33). The Examiner points to this statement as showing that Smith's camera includes a processing means that "correcting a difference in image capturing position between said first optical system and said second optical system," as set forth in claims 22, 23, and 24. However, this description only applies to the second embodiment of Smith's invention shown in Figure 2.

In response, it should be noted that even though the limitation "said processing means correcting a difference in image capturing position between said first optical system and said second optical system" is relied on Figure 2, Column 6, Lines 29-33), the other limitation of claims 22, 23, 24 also read on the elements, which are the same for both Figures 1 and 2. Therefore, the rejection of claims 22, 23, 24 still read on Figures 1 and 2.

In re page 11, Applicants argue that Smith provides one optical system that transfers image data to both image capturing devices and does not disclose or suggest two optical systems that transfer image data separately to the image capturing devices.

In response, regarding claims 22, 23, and 24, the Applicants only recite "a first optical system and a second optical system." The Examiner considers that Smith does disclose these features. Smith discloses imaging optical section 20 in Figures 1 and 2, as a first optical system; and viewfinder optical section 16, in Figures 1 and 2, as a second optical system. It is noted that the image data is transferred separately to the image memory 40 via A/D converter 36 and A/D converter 34, respectively.

In re pages 11-12, Applicants argue that Smith does not disclose or suggest including a processing means that corrects a difference in image capturing position between said first optical system and said second optical system, and does not disclose or suggest eliminating parallax errors between two optical systems as set forth in the claims.

In response, regarding claims 22, 23, and 24, it is noted that the feature "*eliminating parallax errors between two optical systems*" is not recited in these claims; instead, these claims only recite limitation "said processing means correcting a difference in image capturing position between said first optical system and said second optical system." Smith does disclose this limitation as stated in Column 6, Lines 29-33).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 4-15, 22-24, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US 5,926,218).

Regarding claim 22, Smith discloses an image capturing apparatus including a first image capturing device (image sensor 22, figure 1, Column 2, Lines 60-67, Column 4, Lines 55-58); said first image capturing device having a first characteristic (full frame high resolution, Column 2, Lines 60-67); a second image capturing device (image sensor 18, figure 1, Column 2, Lines 50-60); said second image capturing device having a second characteristic (low resolution, Column 2, Lines 50-60, Column 4, lines 59-67); said first and second characteristics being different (different sizes and number of pixels, Column 2, Lines 47-67); a recording means for recording image data (image memory 40, Figure 1, Column 3, Lines 25-30, 52-65); a processing means (microprocessor 52 and image data multiplexer 38, Figure 1, Column 4, Lines 7-67) for processing data of images captured by said first image capturing device and data of images captured by said second image capturing device in such a manner that the two types of images (still image and motion image) are treated as individual images that are independent of each other; a first optical system (imaging optical section 20, Figure 1, Column 3, Lines 5-10; Column 4, Lines 50-53) and a second optical system (viewfinder optical section 16, Figure 1, Column 2, Lines 50-55; Column 4, Lines 45-47); said first optical system supplying image data to said first image capturing device (imaging optical section 20 supplies image data to the image sensor 22, Figure 1); said second optical system supplying image data to said second image capturing device (viewfinder optical section 16 supplies image data to the image sensor 18, Figure 1); and said processing means correcting a difference in image capturing position between said first

optical system and said second optical system (microprocessor 52 eliminates parallax between sensors, Column 6, Lines 14-33).

Regarding claims 4, 5, 6, Kubo et al. discloses said first image capturing device is used for still image recording (still image obtained from image sensor 22, Figure 1; Column 4, Lines 55-58), and said second image capturing device is used for capturing moving images (image sensor 18 provides live resolution (motion-capable resolution), Column 2, Lines 50-60); said second image capturing device also providing preliminary measurement for use in still image recording (the low resolution image sensor 18 is able to provide a user-selected zooming image through imaging optical section 20, Figure 1, Column 6, Lines 34-55).

Regarding claims 7, 8, 9, 10, 11, 12, Smith discloses said first and second optical systems for directing light representing an image of a subject to said first and said second image capturing device (Figure 1); said recording means (image memory 40, Figure 1, Column 3, Lines 25-33) for recording data of images captured by said first image capturing device as still images and for recording data of images captured by said second image capturing device as moving images; and a display means (display module 50, Figure 1, Column 3, Lines 35-51) for displaying image data.

Regarding claims 13-15, Smith discloses wherein said first image capturing device is a CCD solid image capturing device of the full-frame transfer type (image sensor 22 is a full frame high resolution CCD, Column 2, Lines 60-67).

Regarding claims 23, 24, Smith discloses an image capturing apparatus including a first image capturing device (image sensor 22, figure 1, Column 2, Lines 60-67, Column 4, Lines 55-58); a second image capturing device (image sensor 18, figure 1, Column 2, Lines 50-60) having a second characteristic (low resolution, Column 2, Lines 50-60, Column 4, lines 59-67) different from those of said first image capturing device (image sensor 22 is a full frame high resolution image sensor, Column 2, Lines 60-67); a recording means for recording image data (image memory 40, Figure 1, Column 3, Lines 25-30, 52-65); a processing means (microprocessor 52 and image data multiplexer 38, Figure 1, Column 4, Lines 7-67) for processing data of images captured by said first image capturing device as still images (still image obtained from image sensor 22, Figure 1, Column 4, Lines 55-58) and data of images captured by said second image capturing device as still images or moving images (image sensor 18 provides live resolution (motion-capable resolution), Column 2, Lines 50-60); a first optical system (imaging optical section 20, Figure 1, Column 3, Lines 5-10; Column 4, Lines 50-53) and a second optical system (viewfinder optical section 16, Figure 1, Column 2, Lines 50-55; Column 4, Lines 45-47); said first optical system supplying image data to said first image capturing device (imaging optical section 20 supplies image data to the image sensor 22, Figure 1); said second optical system supplying image data to said second image capturing device (viewfinder optical section 16 supplies image data to the image sensor 18, Figure 1); and said processing means correcting a difference in image capturing position between said first optical system and said second optical system (microprocessor 52 eliminates parallax between sensors, Column 6, Lines 14-33).

Regarding claim 26, Smith discloses said first and second optical systems having lines of sight displaced a distance apart (imaging optical section 20 and viewfinder optical section 16 having optical paths 12 and 10, respectively, displaced a distance apart, Figure 1); and said processing means including means for adjusting at least one of a dimension and a lateral displacement of an image captured by one of said first and second image capturing devices to match an image captured by the other thereof (Column 6, Lines 14-55).

Regarding claim 27, Smith discloses wherein said first optical system and said second optical system supply the image data separately to said first image capturing device and said second image capturing device, respectively (Figures 1 and 2 show that imaging optical section 20 (first optical system) supplies image data to the image sensor 22 (first image capturing device); and viewfinder optical section 16 (second optical system) supplies image data to image sensor 18 (second image capturing device); these two optical systems supply image data separately).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 5,926,218) in view of Rhodes (US 6,654,057).

Regarding claims 16-18, Smith fails to specifically disclose wherein said second image capturing means includes a CMOS-type solid image capturing device. However, Rhodes discloses the using of a CMOS imager for cameras (Column 1, Lines 45-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Smith by the teaching of Rhodes in order to obtain a camera, which has small size and low cost (Column 1, Line 55 – Column 2, Line 6).

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 5,926,218) in view of Nonaka (US 5,986,764).

Regarding claim 25, Smith discloses said first and second optical systems having lines of sight displaced a distance apart (imaging optical section 20 and viewfinder optical section 16 having optical paths 12 and 10, respectively, displaced a distance apart, Figure 1).

Smith fails to specifically disclose the processing means including means for calculating a range to an object based on known parameters of said distance and a zoomed field angle. However, Nonaka discloses a distance measurement device to determine the distance L to the subject (a range to an object), which based on the distance B between two lenses (distance apart between the first and second optical systems) and f/x (zoom field angle) as shown in equation (1), Figure 1, Column 5, Lines 10-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Kubo et al. by the teaching of Nonaka in order to determine the distance to a subject using its image (Column 1, Lines 5-7).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ~~Wendy Garber~~ Thai Tran can be reached on (571) 272-~~7308.~~ 7382 The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN LN
7/25/2005

THAI TRAN
PRIMARY EXAMINER